

Work Order ID 110201

December-17-13 9:18:09 AM

110201

Page 1

Item ID: D3535-15

Revision ID:

Item Name: Stainless Steel Wearplate Fwd

Start Date: 12/17/13 Start Qty: 6.00

Required Date: 12/17/13 Req'd Qty: 6.00

Reference:

Approvals:	Process Plan: <u>ML5</u>	Date: <u>13-12-18</u>	Tooling: _____	Date: _____	Run	Start	*NR1*
	QC: _____	Date: _____	SPC (Y/N): _____	Date: _____	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3535	Rev B								

100 0.00

100

Waterjet

FLOW WATER JET

FLOW WATER JET

Memo 0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3535 Dwg Rev: B Prog Rev: B 2-
Deburr if necessary13 0 Jm14-1-10

110

QC2- Inspect parts off machine FAI/FAIB 0.00

110

QC

Quality Control

Memo 0.00

13 0 Jm14-1-10

120

QC8- Inspect parts - second check 0.00

120

QC

Quality Control

Memo 0.00

DAS
27
9-89
14/11/1013 0 Jm14-1-10

DQA:

Date:



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only

Work Order: _____
 Part No. _____
 NCR No. _____

DISPOSITION

Rework
 Scrap
 Use-as-is
 Suspected Unapproved

AGAINST DEPARTMENT/PROCESS

Skid-tube
 Machining
 Thermoforming
 Large Fab

Crosstube
 Small Fab
 Finishing
 Composite

Water Jet
 Prod. Eng. Coor.
 Rec/Store/Packaging
 Supplier

Engineering
 Quality
 Other

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General									
Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Folio/Program	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>	Pressure/Forced		
Centre Not Concentric	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Set-up		
Cracks	<input type="checkbox"/>	Broken/Damage/Defect	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Temperature/Cure		
Crimp/Kink/Ripple/Wave	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Inspection Incomplete/Unqualified	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Weld		
Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>	Wrong Stock Pulled		
Crushing	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Misaligned/off center	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>			
Heat Treat	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>	Other		
Inspection Strip in Tube	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Misread	<input type="checkbox"/>					
Marks/Chatter	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Off-set	<input type="checkbox"/>					
Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>					
Wave/Twist in Tube	<input type="checkbox"/>	Fit/Function	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>					

Work Order ID 110201***110201***

Page 2

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Item ID: D3535-15 Accept: *N900040100* Setup: Start: *NS1*
 Revision ID:
 Item Name: Stainless Steel Wearplate Fwd Stop: *NS2*
 Start Date: 12/17/13 Start Qty: 6.00 Cust Item ID:
 Required Date: 12/17/13 Req'd Qty: 6.00 Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run: Start: *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop: *NR2*
 NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Brake NC	NC BRAKE Memo	0.00 0.00		DAS 30 9-89		13			14/01/13 DAS 36 9-89
Brake NC	1-Form on Brake as per Dwg D3535 using Jigs DT8261and DT83262-Form joggle as per Dwg D3535 using Jig DT81583-Identify as D3535-15								

140
140
QC
Quality Control

QC5- Inspect part completeness to step on W/O	0.00	DAS 27 9-89	13
Memo	0.00		

14/11/13

150
150
Powdercoat
Powder Coating

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 <i>M125008</i>	0.00		
Memo	0.00		
START TIME: <i>2:50</i>	OPEN TEMPERATURE: <i>3:00</i>		
FINISH TIME: <i>2:50</i>			

13 8/4-1-14.

DAS 34 9-89

DQA:

Date:



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only

Work Order: _____
 Part No. _____
 NCR No. _____

DISPOSITION

Rework
 Scrap
 Use-as-is
 Suspected Unapproved

AGAINST DEPARTMENT/PROCESS

Skid-tube
 Machining
 Thermoforming
 Large Fab

Crosstube
 Small Fab
 Finishing
 Composite

Water Jet
 Prod. Eng. Coor.
 Rec/Store/Packaging
 Supplier

Engineering
 Quality
 Other

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General				
Bending	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>	
Centre Not Concentric	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>	
Cracks	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>	
Crimp/Kink/Ripple/Wave	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>	
Cuffs	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>	
Crushing	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>		
Heat Treat	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>	
Inspection Strip in Tube	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>			
Marks/Chatter	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>			
Turning Sequence	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>			
Wave/Twist in Tube	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>			

Work Order ID 110201***110201***

Page 3

December-17-13 9:18:09 AM

Item ID:	D3535-15	Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:					Stop	*NS2*
Item Name:	Stainless Steel Wearplate Fwd					
Start Date:	12/17/13	Start Qty:	6.00	*6*	Cust Item ID:	
Required Date:	12/17/13	Req'd Qty:	6.00	*6*	Customer:	

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* QC	QC3- Inspect Part Finish	0.00	DAS	141115					
Quality Control	Memo	0.00	27						

170 *170* Packaging	Identify as per dwg & Stock Location:	<u>F12-002</u>	0.00	<u>X13</u>	<u>11/10/15</u>
Packaging	Memo		0.00		

180 *180* QC	QC21- Final Inspection - Work Order Release	0.00	<u>PL 14-01-15</u>
Quality Control	Memo	0.00	<u>AD 14-01-15</u>

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only 

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS				
Part No. _____	Rework	Scrap	Use-as-is	Skid-tube	Crosstube	Water Jet	Engineering	
NCR No. _____	Suspected Unapproved			Machining	Small Fab	Prod. Eng. Coor.	Quality	
				Thermoforming	Finishing	Rec/Store/Packaging	Other	
				Large Fab	Composite	Supplier		

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General			
	Bending	Bend	Folio/Program	Outside Dimensions
	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance
	Cracks	Broken/Damage/Defect	Hardware	Part Incorrect
	Crimp/Kink/Ripple/Wave	Burrs	Inspection Incomplete/Unqualified	Part Lost/Missing
	Cuffs	Contamination	Instructions Incomplete/Unclear	Part Moved
	Crushing	Countersink	Misaligned/off center	Positioned Wrong
	Heat Treat	Cut Too Short	Mislabeled	Power Loss/Surge
	Inspection Strip in Tube	Drawing	Misread	Pressure/Forced
	Marks/Chatter	Drill Holes	Off-set	Set-up
	Turning Sequence	Finish	Out of Calibration	Temperature/Cure
	Wave/Twist in Tube	Fit/Function	Out of Sequence	Weld
				Wrong Stock Pulled
				Other

Picklist Print

December-17-13 9:18:09 AM

Page 1

Work Order ID: 110201 **Start Date:** 12/17/13 **Required Date:** 12/17/13
Parent Item: D3535-15 **Start Qty:** 6.00 **Required Qty:** 6.00
Parent Item Name: Stainless Steel Wearplate Fwd

Comments: IPP Rev:A New Issue 07-02-15 JLM
IPP Rev:B As per Rev B 07-08-31 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S20GA 304/316 .040 Sheet		Purchased	No			100	sf	436.3000	1.0205	445263 12			Jm 14-1-10

Location	Loc Qty	Loc Code
MAT020	436.30001	
m125754	24.17001	
m126852	111.13	
m127454	301	127454

DQA: _____ Date: _____

Date:

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only



Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework Scrap Use-as-is Suspected Unapproved	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Design											
Doc/Data											
Equip/Tooling											
Handling/Pre											
Material											
Operator											
Offset/Setup											
Process											
Supplier											
Training											
Transport											
Unapproved											
FAULT CATEGORY											
Landing Gear			General								
Bending Centre Not Concentric Cracks Crimp/Kink/Ripple/Wave Cuffs Crushing Heat Treat Inspection Strip in Tube Marks/Chatter Turning Sequence Wave/Twist in Tube			Bend BOM/Route Broken/Damage/Defect Burrs Contamination Countersink Cut Too Short Drawing Drill Holes Finish Fit/Function								
			Folio/Program Grain Hardware Inspection Incomplete/Unqualified Instructions Incomplete/Unclear Misaligned/off center Mislabeled Misread Off-set Out of Calibration Out of Sequence								
			Outside Dimensions Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved Positioned Wrong Power Loss/Surge								
			Pressure/Forced Set-up Temperature/Cure Weld Wrong Stock Pulled Other								

DART AEROSPACE LTD	Work Order:	110201
Description: Wearshoe	Part Number:	D3535-15
Inspection Dwg: D3535 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

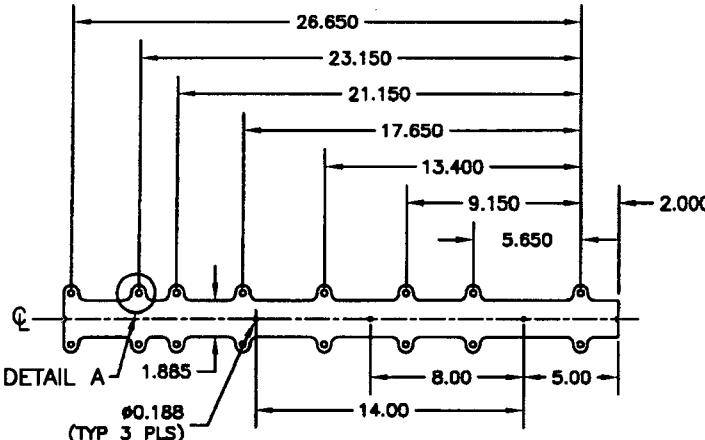
X First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.885	+/-0.010	1.894"	-		V	JLmc1
2.000	+/-0.010	2.000"	-		V	
5.650	+/-0.010	5.650"	-		V	
9.150	+/-0.010	9.150"	-		V	
14.400	+/-0.010	14.400"	-		T	JLmc1
19.650	+/-0.010	19.650"	-		T	
24.900	+/-0.010	24.900"	-		T	
30.150	+/-0.010	30.150"	-		T	
33.650	+/-0.010	33.650"	-		T	
35.650	+/-0.010	35.650"	-		T	
39.150	+/-0.010	39.150"	-		T	
Ø0.188	+0.005/-0.001	0.190"	-		V	
24.00	+/-0.030	24.000"	-		T	
16.00	+/-0.030	16.000"	-		T	
8.00	+/-0.030	8.004"	-		V	
5.00	+/-0.030	5.003"	-		V	
0.300	+/-0.010	0.304"	-		V	
0.300	+/-0.010	0.303"	-		V	
0.038	+/-0.010	0.035"	-		V	

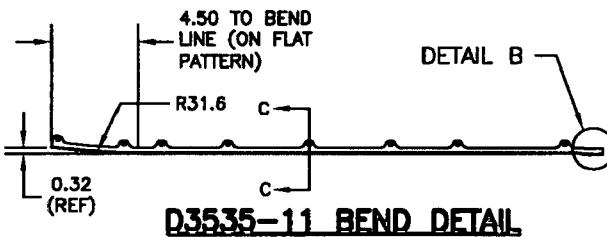
DAS

Measured by:	Jm	Audited by:	27	Prototype Approval:	N/A
Date:	14/1/10	Date:	14/1/10	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.05.10	New Issue	KJ/JLM	E



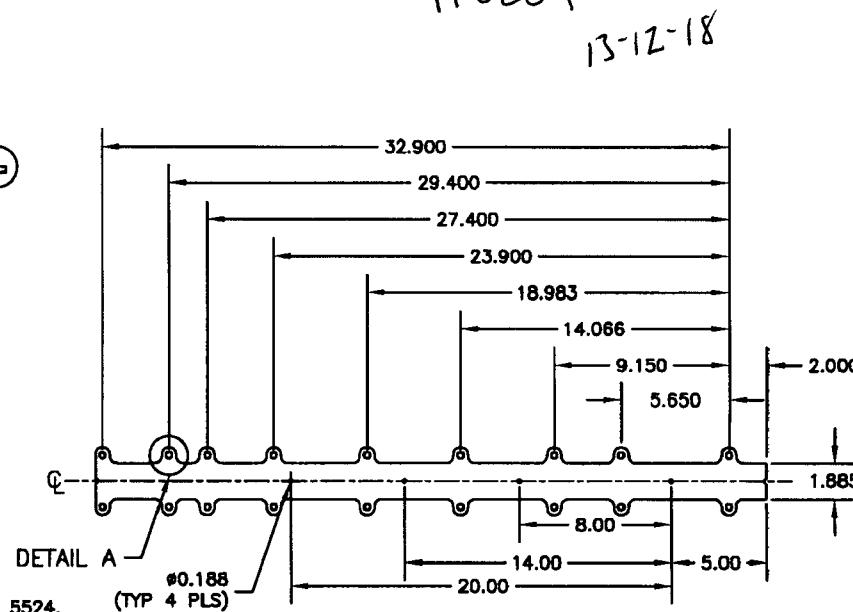
D3535-11F FLAT PATTERN



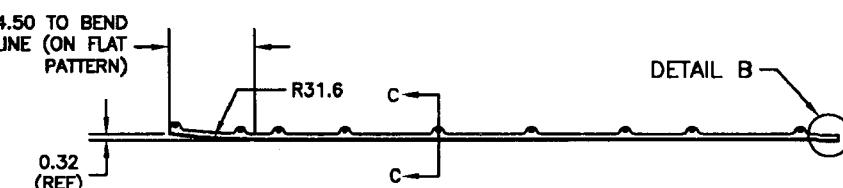
D3535-11 BEND DETAIL

NOTES

- 1) MATERIAL: AISI 304/316 SS SHEET PER AMS 5513 OR AMS 5524.
20 GAUGE (0.038 THICK)
(REF DART SPEC M304S20GA)
- 2) FINISH: POWDER COAT GREY SANTEX (4.3.5.6) PER
QSI 005 4.3
- 3) PART IS SYMMETRICAL ABOUT \mathcal{C}
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS
OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES TO 0.010 MAX
- 7) IDENTIFY WITH DART P/N USING WHITE FINE POINT
PAINT MARKER
- 8) SEE PAGE 7 FOR DETAILS AND SECTION



D3535-13F FLAT PATTERN



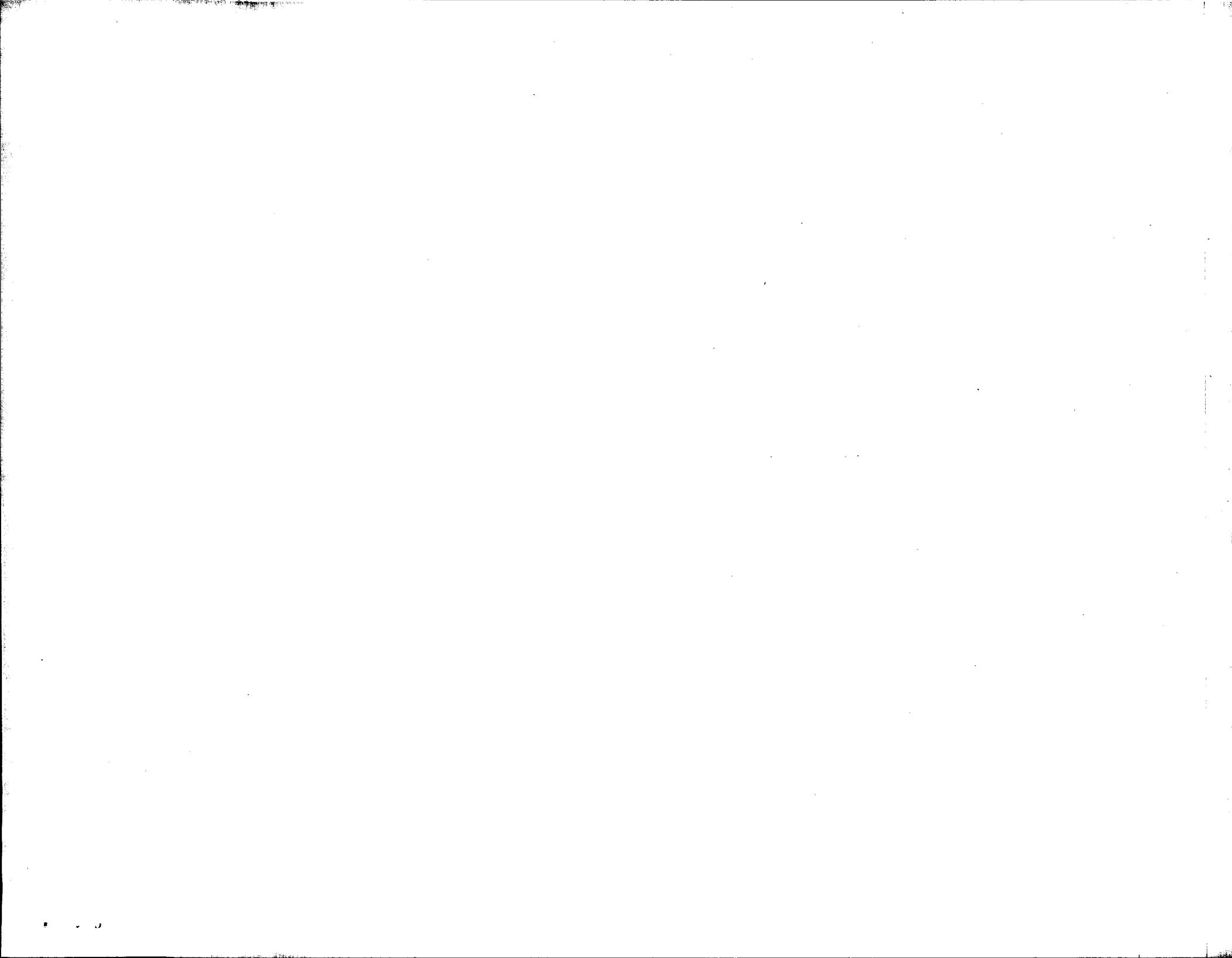
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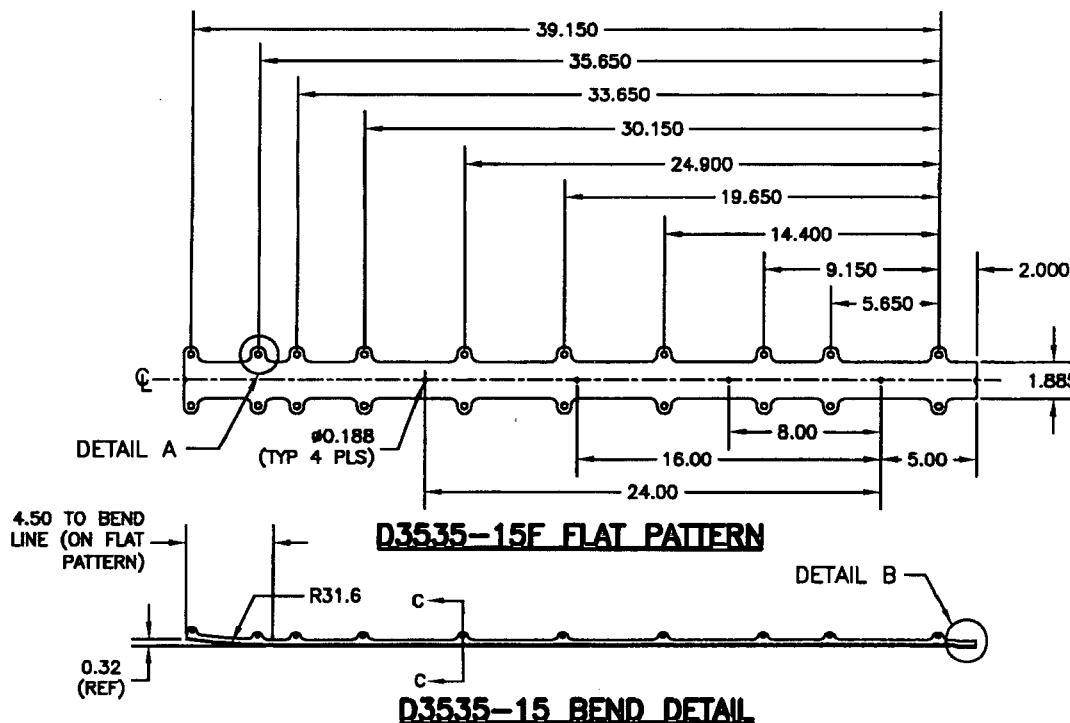
RELEASED
37-04-24



DESIGN	DRAWN BY	DART AEROSPACE USA, INC.
CB	PH	PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO.
07.04.17	<i>[Signature]</i>	D3535
A	06.10.25	NEW ISSUE
B	07.04.17	MOVE TAB OUTBOARD, ADD AMS SPEC

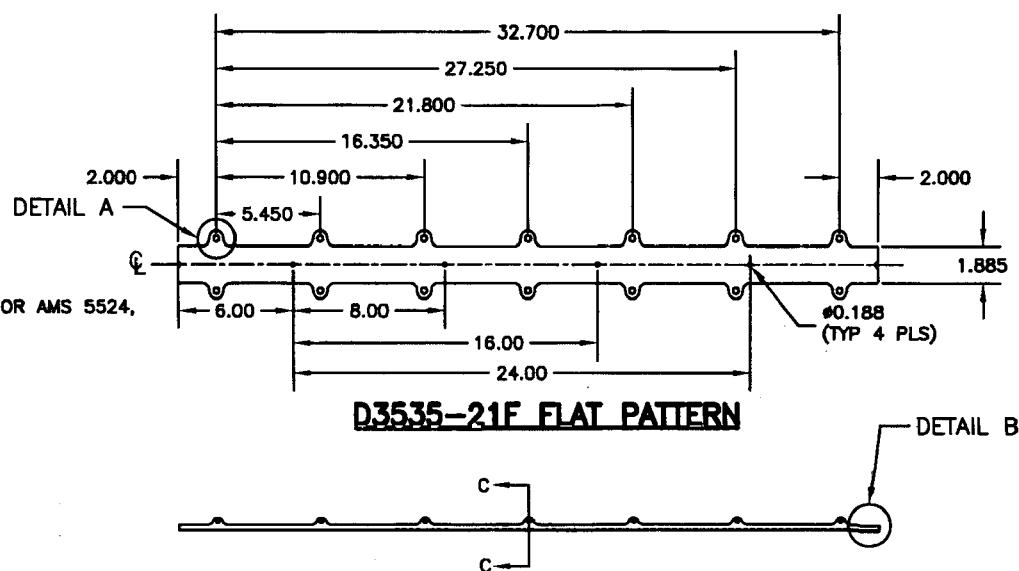
REV. B
SHEET 1 OF 7
SCALE 1:10





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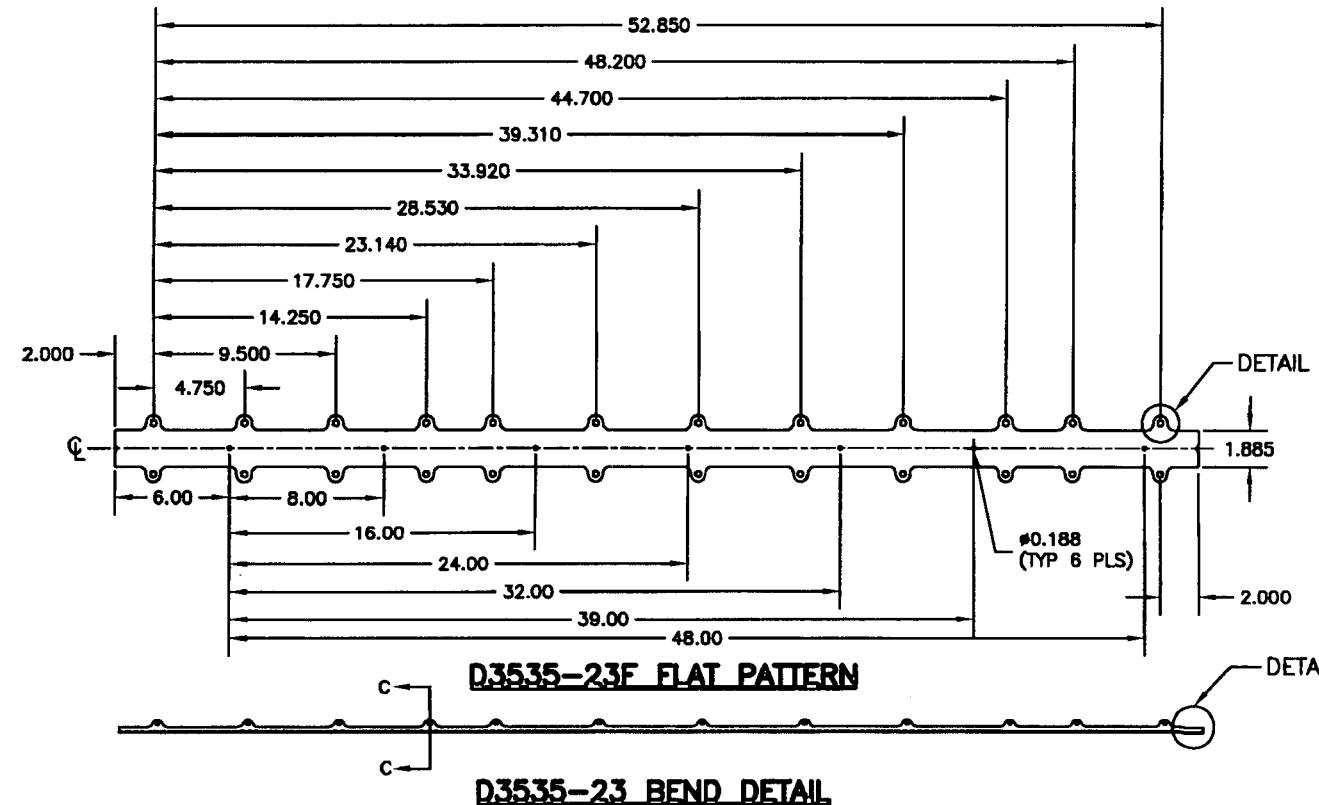
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20 GAUGE (0.038 THICK)
(REF DART SPEC M304S20GA)
- 2) FINISH: POWDER COAT GREY SANTEX (4.3.5.6) PER
QSI 005 4.3
- 3) PART IS SYMMETRICAL ABOUT Q
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS
OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES TO 0.010 MAX
- 7) IDENTIFY WITH DART P/N USING WHITE FINE POINT
PAINT MARKER
- 8) SEE PAGE 7 FOR DETAILS AND SECTION



D35.35-21 BEND DETAIL

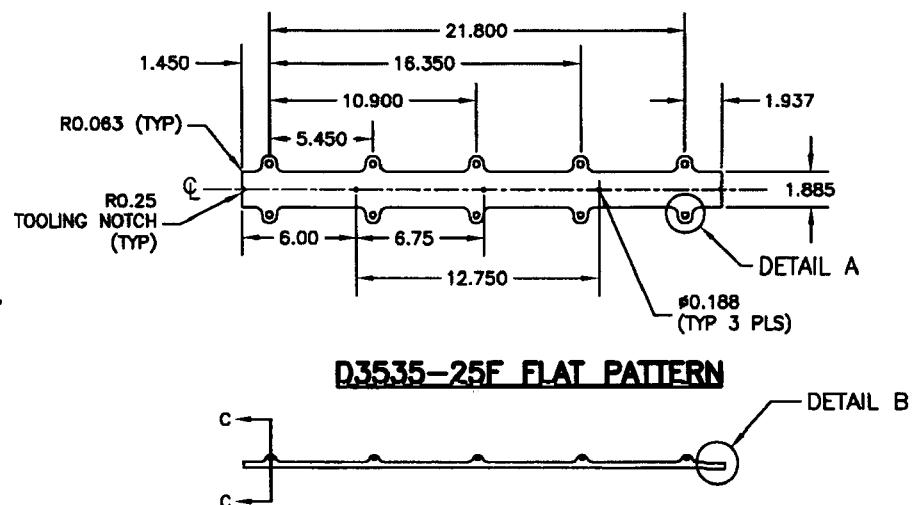


CHECKED ✓	APPROVED ✓	DRAWING NO. D3535	DART AEROSPACE USA, INC.	
			PORT HADLOCK, WA	REV. B
DATE 07.04.17	TITLE WEARSHOE	SHEET 2 OF 7	SCALE 1:10	

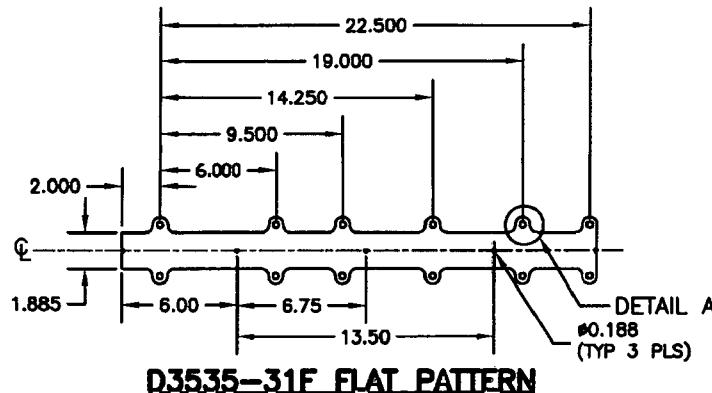


NOTES

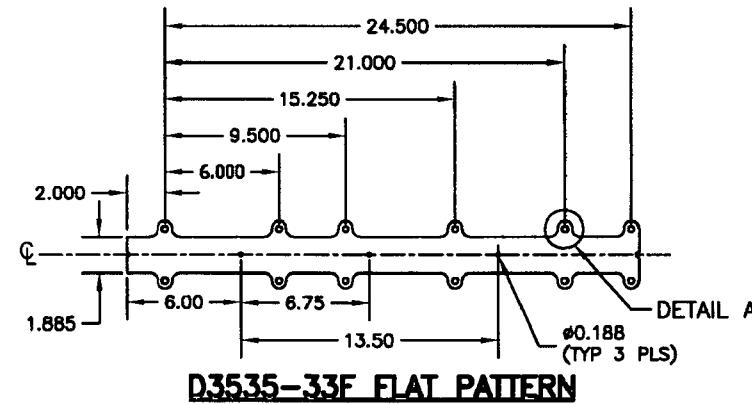
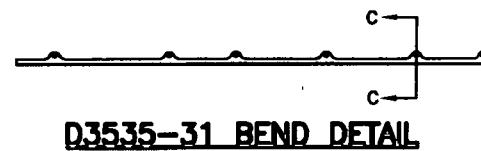
- 1) MATERIAL: AISI 304/316 SS SHEET PER AMS 5513 OR AMS 5524, 20 GAUGE (0.038 THICK) (REF DART SPEC M304S20GA)
- 2) FINISH: POWDER COAT GREY SANTEX (4.3.5.6) PER QSI 005 4.3
- 3) PART IS SYMMETRICAL ABOUT $\frac{C}{2}$
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES TO 0.010 MAX
- 7) IDENTIFY WITH DART P/N USING WHITE FINE POINT PAINT MARKER
- 8) SEE PAGE 7 FOR DETAILS AND SECTION



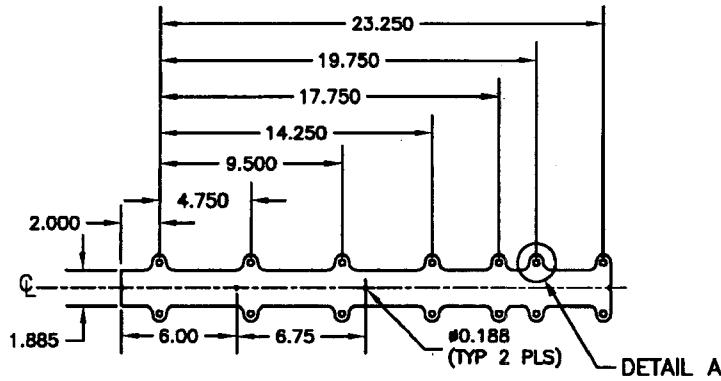
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C.B	RH	PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO.
<i>MM</i>	<i>MM</i>	D3535
DATE		TITLE
07.04.17		WEARSHOE
SCALE		REV. B
1:10		SHEET 3 OF 7



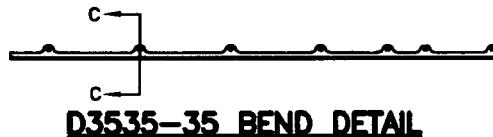
RELEASED
07.04.17



DESIGN	DRAWN BY	DART AEROSPACE USA, INC.
C.B	PH	PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO.
<i>[Signature]</i>	<i>[Signature]</i>	D3535
DATE	TITLE	REV. B
07.04.17	WEARSHOE	SHEET 4 OF 7
		SCALE
		1:10



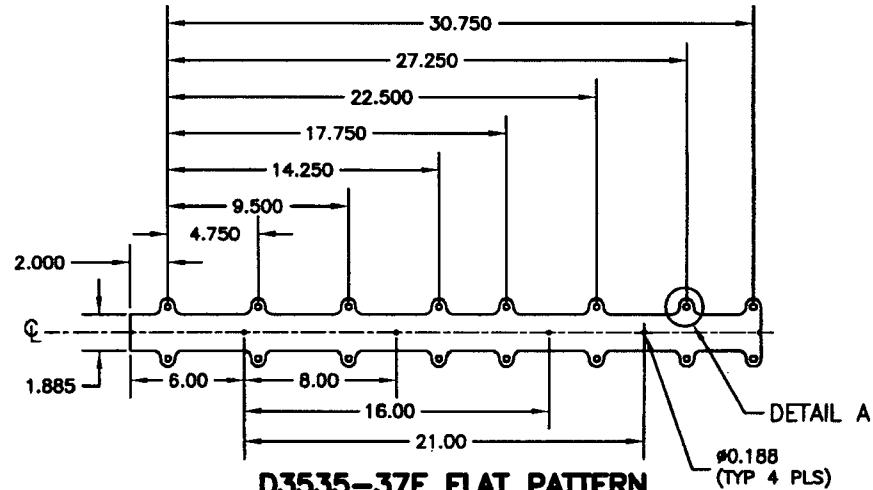
D3535-35F FLAT PATTERN



D3535-35 BEND DETAIL

NOTES

- 1) MATERIAL: AISI 304/316 SS SHEET PER AMS 5513 OR AMS 5524, 20 GAUGE (0.038 THICK) (REF DART SPEC M304S20GA)
- 2) FINISH: POWDER COAT GREY SANTEX (4.3.5.6) PER QSI 005 4.3
- 3) PART IS SYMMETRICAL ABOUT $\frac{1}{4}$
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES TO 0.010 MAX
- 7) IDENTIFY WITH DART P/N USING WHITE FINE POINT PAINT MARKER
- 8) SEE PAGE 7 FOR DETAILS AND SECTION



D3535-37F FLAT PATTERN



D3535-37 BEND DETAIL

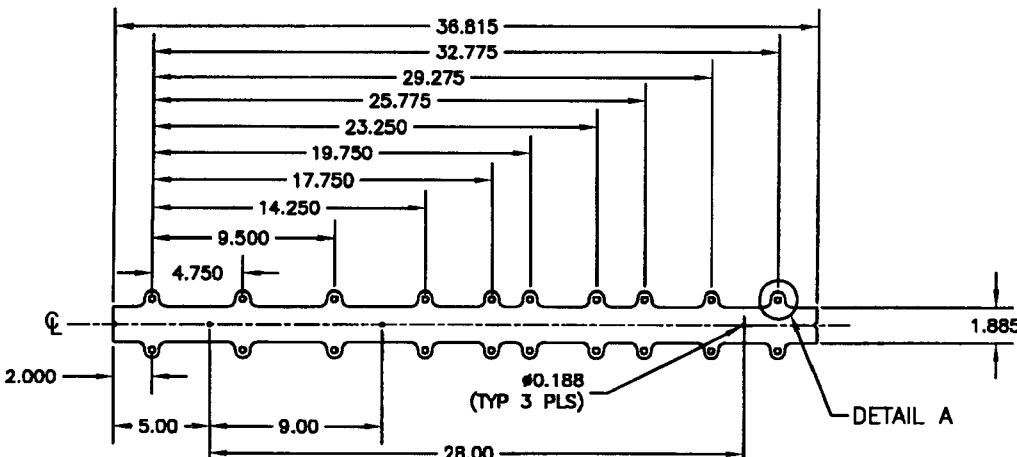
DESIGN	DRAWN BY	DART AEROSPACE USA, INC.
C.B	RH	PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO.
		D3535
DATE		SCALE
07.04.17		1:10
		REV. B
		SHEET 5 OF 7

DART

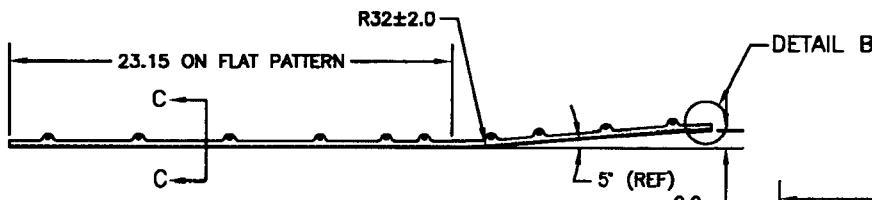
RELEASED
07.04.24

Notes

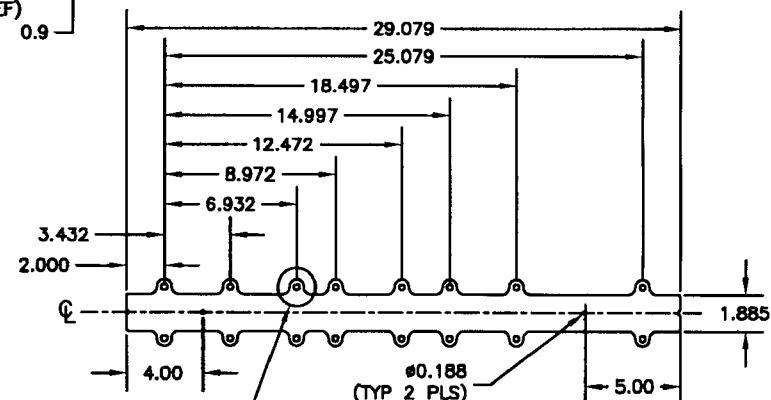
- 1) MATERIAL: AISI 304/316 SS SHEET PER AMS 5513 OR AMS 5524, 20 GAUGE (0.038 THICK) (REF DART SPEC M304S20GA)
- 2) FINISH: POWDER COAT GREY SANDTEX (4.3.5.6) PER QSI 005 4.3
- 3) PART IS SYMMETRICAL ABOUT $\frac{Q}{2}$
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES TO 0.010 MAX
- 7) IDENTIFY WITH DART P/N USING WHITE FINE POINT PAINT MARKER
- 8) SEE PAGE 7 FOR DETAILS AND SECTION



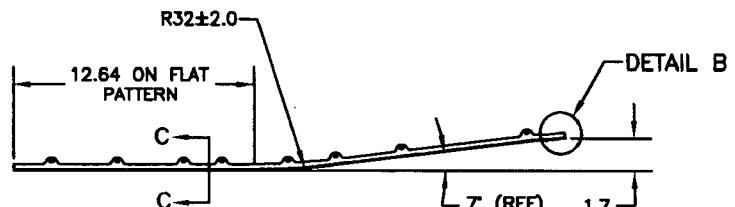
D3535-39F FLAT PATTERN



D3535-39 BEND DETAIL



D3535-41F FLAT PATTERN



D3535-41 BEND DETAIL

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.
C8	PF	PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO.
<i>MM</i>	<i>MM</i>	D3535
DATE		SCALE
07.04.17		1:10
		REV. B
		SHEET 6 OF 7

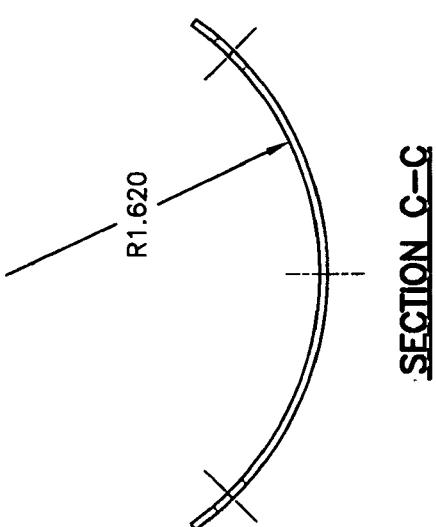
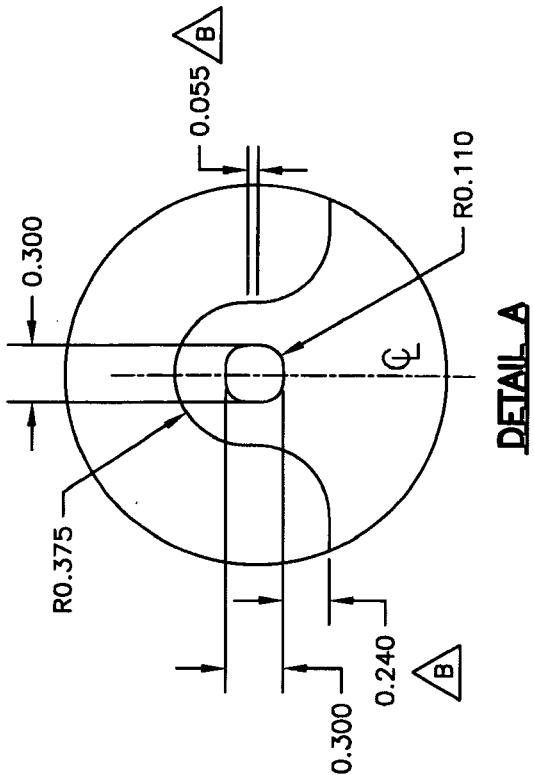
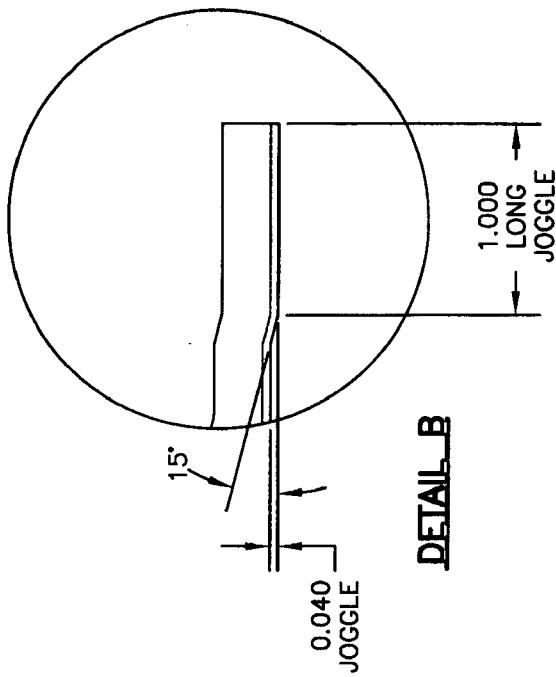




DESIGN <i>CB</i>	DRAWN BY <i>PH</i>	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED <i>[initials]</i>	APPROVED <i>[initials]</i>	DRAWING NO. D3535	REV. B SHEET 7 OF 7
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07.04.24 *[initials]*



SECTION C-C

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